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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,466	02/25/2002	Tetsuya Okumura	57090 (70904)	4306
21874	7590	09/12/2005	EXAMINER	
EDWARDS & ANGELL, LLP			PSITOS, ARISTOTELIS M	
P.O. BOX 55874			ART UNIT	
BOSTON, MA 02205			PAPER NUMBER	

2653

DATE MAILED: 09/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/082,466	OKUMURA ET AL.	
	Examiner	Art Unit	
	Aristotelis M. Psitos	2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Applicants' response of 2/16/05 has been considered with the following results.

Specification

The amendment to the title of the invention is greatly appreciated.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed ability with respect to that found in claims 19 and 20 ("calculating an average value") must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 13,5,7,11,13,15,17,and 19 and 20 depending upon these are objected to under 37 CFR 1.75(c), as being contradictory.

It is noted that is claim 1, lines 2-5 recite the measurement means for both the short and long power control mark. However, lines 9-13 emphasize that the measuring corresponds ONLY to the short

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reproducing power. This causes the contradiction. The examiner cannot reconcile such with the drawings and the remainder of the specification. It would appear – as depicted in figure 1 of the application that the measuring means for both the long and short control marks are elements 9 and 8 respectively. The wherein clause either a) repeats itself, i.e., that this element does indeed measure only the short control mark, or b) is attempting to limit the overall system so as to be responsive ONLY to the short control mark. IT is not clear what applicants are attempting to define.

The remaining dependent claims fall accordingly.

Claim 2 uses the phrase “bit arrangement pattern” without the requirement of the ONLY limitation. Hence the examiner interprets these claims as NOT requiring the above note ONLY condition.

As far as the claims recite positive limitations and are interpreted by the examiner, the following rejections are made.

In the below analysis the limitations of the following claims are identical:

- a) claims 3 and 4; identification of the short control mark as the 2T mark, pattern of mT, 2T, 2T, nT
- b) claims 5 and 6; identification of $m=n=2$
- c) claims 7-12: controlling means based on the measured reproduced signal characteristic
- d) claims 13-18: ratio of long and short control marks.
- e) claims 19-20 – the average calculation of the short reproducing marks.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

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The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 1,2, 7-18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over the acknowledged prior art further considered with JP 200-099945.

Applicants' depiction of the acknowledged prior art hardware (figure 5) is greatly appreciated.

The examiner's previous request for further identification of the prior art has been overlooked in applicants' response. The examiner considers the JP system discussed in the specification – JP 08-63817 as such but need confirmation from applicants in order to complete the search report.

As noted in that figure and as analyzed below:

Claim 1

An optical reproducing device comprising:	yes – inherently present – see
	Also the attached MAT (machine assisted
	Translation of such)
predetermined length mark signal	as discussed in the specification
measurement means for measuring	such elements are present – see also
reproduction signal characteristics	the MAT – starting at parag. 25 -
of a short reproducing power control	especially with respect to figures
mark and of a long reproducing power	2,3,12,14-22, where both the long
control mark information data that is	and short control mark is appropriately
recorded in data recording	measured
area of an optical recording medium;	
and	
power control means for controlling	see discussion with respect to the feedback
reproducing power of a light beam	from the measuring elements to the power

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based on the measured reproduction control element.
signal characteristics of the short and
long reproducing power control marks,

wherein the predetermined length mark inherently follows – see discussion
signal measurement means is further in the MAT with respect to the above noted
configured and arranged for detecting short reproducing power control mark(s) in the
a specific pattern including the short bit pattern – bit patterns are further elaborated
reproducing power control mark from a in paragraph(s) 64- 109.

bit arrangement pattern of the information data

in the data recording area,

and

for measuring the reproduction signal
characteristic corresponding only to the short
reproducing power control mark included in
the specific pattern.

With respect to claim 2, such is also met by the acknowledged prior art (JP 08-063817 ?) as analyzed above.

The additional comparison means is present – see in the attached MAT paragraphs – 78 wherein the incoming signals are a/d converted – hence bit patterns are reproduced and subsequently processed – including the long and short control pulses, as well as the description of figure 13. The CPU performs the subsequently claimed function of the comparison element.

Alternatively, if applicants can convince the examiner that the above acknowledge prior art system fails to provide for the bit comparison and function as recited in claim 2, then under 103 considerations, the examiner would rely upon JP 2000-099945 – see the abstract in the accompanying MAT as it relates to the pattern verification circuit element 10.

With respect to the limitations of groups c and d (claims 7-12 and 13-18 respectively) the claimed

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"condition control means" and the ratio measurement ability are considered inherently present therein.

Response to Arguments

Applicant's arguments with respect to these claims have been considered but are moot in view of the new ground(s) of rejection.

Furthermore, in keeping with the above confusion with respect to the ONLY recitation as found in independent claim 1, the examiner interprets such as merely emphasizing the short control pulse measuring element 8 of the acknowledged prior art. If applicants are attempting to define their system as ONLY operating upon the short control mark, such is not clear.

2. Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1,2,7-18 above, and further in view of Tanaka et al

The acknowledged prior art hence discloses the limitations of the claims- as further analyzed above with the exception of requiring/limiting the measuring of the short reproducing control mark, identified as 2T, and a pattern of 5 of these pulses.

Although various short and long pulses are disclosed in the above document, see figure 15 therein (MAT as well) the limitations as recited in claims 3-6 are not clearly depicted.

The Tanaka reference clearly depicts various signal sequences (bits) see the discussion with respect to his figure 10 starting at col. 9 lines 15.

It would have been obvious to modify the base system with the above teaching from Tanaka et al, motivations is to compensate for the thermal-shift pattern and provide for a better signal detection ability.

Response to Arguments

Applicant's arguments filed 2/16/05 have been fully considered but they are not persuasive.

The arguments focus on the difference of operations of the secondary system, i.e., a test recording reproducing power control scheme as opposed to the claimed power control scheme.

Applicants' arguments are misdirected. Tanaka et al was not relied upon for such hardware – such is already acknowledged by applicants as being prior art.

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Tanaka was cited as illustrative of a control pulse sequence of this type. Hence the examiner apologizes to applicants if they have misinterpreted the rejection. The examiner only relies upon the Tanaka reference for teaching such a control sequence in this environment. Hence, the rejection is maintained.

Claims 19 and 20 – as dependent upon claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to the above claims above, and further in view of Okamura et al – ('992).

The ability of using "averaging" or providing for a mean of the detected pulses is taught in the Okumura et al system – see discussion at col. 20 starting at line 45 for instance.

It would have been obvious to modify the base systems (either the acknowledged prior art, or the acknowledged prior art & Tanaka et al) with the above additional teaching, motivation is to yield a better responding system by signal averaging.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1,2, 7-12, 13-18, 19,20 so dependent are rejected under the judicially created doctrine of double patenting over claims 1, 11/1, 12/11/1, and 9/1 of U. S. Patent No. 6,404,717 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows:

a) the above limitations as analyzed with respect to claims 1 and 2 are presently defined in claim 1 albeit in alternative language. Although the above noted claim includes additional subject matter, i.e.,

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the timing producing section for instance.

With respect to the limitations of pending claims 7-12, this is met by either the already defined signal quantity detection section – and patented claim 10.

With respect to the limitations of claims 13-18, the ratio ability is found in the last claimed element in the patented claim 1.

With respect to the newly introduced “averaging” limitations (claims 19 and 20), such is found in claim 9 of the patent.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application, which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

4. Claims 1,3,5 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 7/5/3 of U.S. Patent No. 6771576 in view of Tanaka et al.

The above analyzed elements as stated in paragraph 1 above, and as argued with respect to the only limitation as found in the ultimate wherein clause.

With respect to the 2T limitations – the examiner relied upon the reasons as stated above with respect to paragraph 2.

It would have been obvious to modify the base system with the above teaching from Tanaka et al, motivations is to compensate for the thermal-shift pattern and provide for a better signal detection ability.

5. Claims 2,4, 6 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 7/5/3 of U.S. Patent No. 6771576 in view of either Tani or Fuji and all further considered with Tanaka et al.

Claim 2 parallels the limitations of claim 1 but further includes the bit reproduction/comparison elements. The examiner interprets this as the additionally taught limitation with respect to binarization as further taught by either Tani – see the description with respect to figure 14 (a/b) binarization circuit 90, or alternatively in Fuji – see the description with respect to figure 9 (- the read signal is binarized).

The reliance upon Tanaka et al is as stated above in paragraph 2.

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It would have been obvious to modify the above noted patented claim to include the additional bit reproducing/comparison ability and the 2T limitations (claims 4 and 6) for the additional signal processing capability to ensure proper signal decoding/detection.

6. Claims 7-12 and 17-18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over either claim 7/5/3 of U.S. Patent No. 6771576 in view of Tanaka et al, or over claim 7/5/3 of U.S. Patent No. 6771576 in view of either Tani or Fuji and all further considered with Tanaka et al and further considered with JP 08-06317.

With respect to the limitations, i.e., groups c and d as identified above, these are found in the JP base reference 08-06317 – both the “condition control” and ration elements.

It would have been obvious to modify the above noted claims as relied upon above in either paragraphs 4 or 5 with the additional teachings from the JP document, motivation is to yield a better reproduced signal for proper signal processing.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

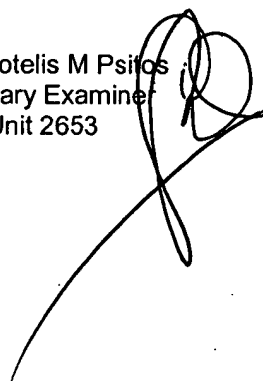
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M. Psitos whose telephone number is (571) 272-7594. The examiner can normally be reached on M-Thursday 8 - 4.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aristotelis M Psifos
Primary Examiner
Art Unit 2653



AMP